

**FINAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT

REGARDING THE CALIFORNIA PLUMBING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5**

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a final statement of reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

UPDATES TO THE INITIAL STATEMENT OF REASONS

The Office of Statewide Health Planning and Development (OSHPD) finds that no revisions have been made which would warrant a change to the initial statement of reasons for the proposal to:

- Adopt the 2006 Uniform Plumbing Code (UPC) for incorporation, by reference, into the 2007 California Plumbing Code (CPC).
- Carry forward existing California amendments related to hospitals, skilled nursing facilities, licensed clinics and correctional treatment centers.
- Amend Table 4-2 regarding plumbing fixtures for consistency with the proposed 2007 California Building Code.
- Provide an exception prohibiting the use of PEX-AL-PEX for water distribution in health facilities. The use of PEX-AL-PEX piping will not be allowed for applications under OSHPD's jurisdiction.
- Repeal 2001 UPC amendment regarding air conditioning condensate drain sizing. This amendment is no longer necessary because this requirement is in the 2006 UPC and is consistent with the 2006 Uniform Mechanical Code.
- Amend Table 6-9 – Water Usage and Water Temperature to reduce the requirements for hot water system supply capacity for health facilities.
- Provide an exception prohibiting the use of pressed fittings for potable water supply for health facilities.
- Clarify that requirements for skilled nursing facility construction also apply to “distinct part” units included on a hospital license and units within hospital buildings.
- Various existing California amendments are being repealed, modified or relocated for consistency with the 2006 UPC language and format.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

The OSHPD has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts.

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S)

Public Comment: Michael Cudahy, Plastic Pipe and Fittings Association (PPFA)

Comment: The commenter states that both PEX and CPVC are tested to a more stringent standard than copper, under NSF Standard 61, because copper pipe cannot meet leaching tests conducted at some of the lower pH drinking water chemistry found in California and elsewhere across the nation.

Response: The OSHPD amendments prohibiting the use of PEX and CPVC plumbing systems are existing amendments and are being carried forward in this code adoption cycle. These amendments are not open for public comment during this rulemaking period, therefore, OSHPD will make no changes to the express terms per this comment.

Comment: The commenter states that the full statewide adoption of hot and cold water distribution by PEX-AL-PEX piping systems would provide *environmental benefits to California* such as less copper discharge, energy and water savings over legacy systems such as copper tube, all at a lower installed cost for consumers. The commenter provides the supporting documents listed below:

1. *Preventing Corrosion Protects San Francisco Bay, 05/2003, RWQCP-2500c*
2. *Copper Piping Corrosion: A Problem for San Francisco Bay, February 1997, RWQCP*
3. *Evaluation of Residential Hot Water Distribution Systems by Numeric Simulation, March 2004, Buildings Technology Center Oak Ridge National Laboratory, Robert Wendt, et al.*
4. *Evaluation of Residential Water Distribution Piping Installation, September 2006, NAHB RC PATH report*
5. *Performance Comparison of Residential Hot Water Systems, November 2002, Prepared for: National Renewable Energy Laboratory by NAHB Research Center, Inc., Joe Wiehagen and Jeannie Legget Sikora.*
6. *Cost Analysis of High-Rise Plumbing Piping System, July 2006, Julius Ballanco, P.E.*

Additionally, the commenter raises the issue that most California city or county “administrative authorities” have approved the use of PEX-AL-PEX for potable water systems.

Response: OSHPD’s prohibition of PEX-AL-PEX is not based on the issues raised by the commenter. It is based on public safety concerns for health facility patients.

Documentation regarding the safety of PEX-AL-PEX, in addition to the limitations noted in the Installation Handbook have resulted in OSHPD’s prohibiting the use of PEX-AL-PEX in OSHPD regulated occupancies.

Studies have demonstrated that PEX material is susceptible to chemical leaching, both from the outside environment and chemicals leaching out of the PEX material itself. The layer of aluminum in the PEX-AL-PEX piping may or may not mitigate some of the chemical leaching from the outside environment, but there is no reason to believe that it will have any effect on the leaching from the material itself. As a result of litigation, one PEX manufacturer has disclosed that the material does have chemical leaching problems including MTBE (methyl tertiary butyl ether, a known human carcinogen) and TBA (tertiary butyl alcohol), which are by-products of the manufacturing process.

The manufacturers association’s Installation Handbook for PEX indicates several limitations on the use of the product. It is unknown whether these limitations are still applicable with the use of

PEX-AL-PEX. These limitations include applications where the water temperature could exceed 180° F. Current code requirements include 180° F water for rinse water at automatic dishwashing equipment and 160° F water for laundry, maintained over the entire wash and rinse period. In order to supply this water temperature at the fixture, it will be necessary to provide hotter water at the source.

Another limitation indicated in the Handbook is to not allow extended contact with a number of “commonly encountered construction materials.” One type of material listed is “fire wall penetration sealing compounds,” which are used extensively in hospitals and skilled nursing facilities. The Handbook provides an exception for “water soluble, gypsum-based caulking,” but this would be difficult to enforce. Materials may be changed from what is approved on the drawings, and there is an enormous variety of construction materials used on hospital projects. Requiring field staff to know the chemical composition of all the materials, and adverse interactions with chemicals found in other materials is not a reasonable expectation.

PEX-AL-PEX is a new material in the 2006 Uniform Plumbing Code. OSHPD is charged with the promulgation of regulations to protect the health and safety of the occupants of hospitals, skilled nursing facilities, licensed clinics and correctional treatment centers. The Office must be conservative in the adoption of regulations, considering the vulnerable users of these facilities. Additional research and testing must be performed to demonstrate the safety and reliability of this new material before it can be accepted for use in health facilities.

Based on public safety concerns, OSHPD will not allow usage of PEX-AL-PEX until an evaluation and analysis of this product can be performed and the Installation Handbook issues can be addressed OSHPD can be assured that there are no public safety and environmental concerns.

DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS

The OSHPD has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

No alternatives were proposed. OSHPD has determined that the proposed regulations will not have an adverse economic impact on small businesses.

COMMENTS MADE BY THE OFFICE OF SMALL BUSINESS ADVOCATE

The OSHPD did not receive comments from the Office of Small Business Advocate.

COMMENTS MADE BY THE TRADE AND COMMERCE AGENCY

The OSHPD did not receive comments from the Trade and Commerce Agency.